

CLAIMS

1. System (20) of feeding preforms, particularly designed to feed machines for blow moulding receptacles such as bottles, of the type comprising, from upstream to downstream in the longitudinal direction of travel of the preforms (10), at least one sorting and alignment device (28) whose top end is provided with preforms (10) in a jumble and whose bottom end comprises at least two alignment rollers (38), substantially parallel and rotated about their respective axis (A1, A2), that are designed to position the preforms (10) in feeding rails (30), inclined relative to the horizontal, to convey them to a machine (22), and of the type comprising at least one ejection wheel (40) that is arranged above the preforms (10) and rotated about an axis (A3) which extends generally transversely, characterized in that the ejection wheel (40) is arranged downstream of the alignment rollers (38) so as to eject the incorrectly positioned preforms (10) from the feeding rails (30) and in that it comprises means (46) of lifting the incorrectly positioned preforms (10) of the lying type that extend in particular generally transversely relative to the feeding rails (30), so as to cause them to be ejected by the ejection wheel (40) arranged downstream.

2. System of feeding preforms according to Claim 1, characterized in that the lifting means (46) comprise at least one control section (48) forming a ramp designed to interact with a part of the preform (10) lying transversely so as to cause it to be lifted from the rails (30) to a high position for ejection, in which the said part of the preform (10) is capable of entering into contact with a part of the wheel (40) to be ejected.

3. System of feeding preforms according to Claim 2, characterized in that the lifting means (46) comprise, downstream of the control section (48) forming a ramp, a retention section (50) in order to retain the preform, after lifting, in its high position for ejection.

4. System of feeding preforms according to any one of the preceding claims, characterized in that the feeding rails (30) comprise at least one preform stabilization section (31), generally rectilinear, that is interposed longitudinally between the alignment  
5 rollers (38) and the ejection wheel (40).

5. System of feeding preforms according to any one of the preceding claims, characterized in that the ejection wheel (40) is positioned at a determined height above the feeding rails (30) so as to eject the incorrectly positioned preforms (10) without  
10 entering into contact with the preforms correctly positioned in the rails.

6. System of feeding preforms according to any one of the preceding claims, characterized in that the transverse axis (A3) of the ejection wheel (40) extends generally in a plane parallel to the  
15 plane of the rails (30) and so as to form an angle lying between  $0^\circ$  and  $90^\circ$ , particularly between  $20^\circ$  and  $75^\circ$ , relative to the perpendicular to the longitudinal direction of travel of the preforms in the feeding rails (30).

7. System of feeding preforms according to any one of the preceding claims, characterized in that the ejection wheel (40)  
20 comprises a shaft (42) having, in section along a plane orthogonal to the axis (A3) of rotation of the wheel, a parallelepipedic or triangular section.

8. System of feeding preforms according to Claim 7,  
25 characterized in that the ejection wheel (40) comprises flexible radial elements, such as radial paddles (44), that are each fixedly attached to one of the faces of the shaft (42) of the ejection wheel (40).

9. System of feeding preforms according to any one of the preceding claims, characterized in that it comprises means of  
30 recovering and/or recirculating, to the sorting and alignment device (28), the incorrectly positioned preforms (10) that have been ejected.